ADVANCES IN MATHEMATICS **86**, 263 (1991)

Book Reviews

N. CUTLAND, *Nonstandard Analysis and Its Applications*, Cambridge Univ. Press, 1988, 346 pp.

Most collections of papers written by various authors are dismal: one has to learn new notation with each chapter, and the authors usually make a point of ignoring each other's existence. It is therefore refreshing to find a book where each chapter is written by an expert, and from which one can nonetheless learn much. We hesitate to pronounce this the best introduction to nonstandard analysis—there are so many nowadays—but this is certainly one from which one can learn the subject without pain.

D. S. MITRINOVIC, J. E. PECARIC, AND V. VOLENEC, *Recent Advances in Geometric Inequalities*, Kluwer, 1989, 710 pp.

Inequalities are a field that every graduate student should study for at least a one-term course. What he or she learns in it is likely to be useful for the rest of his or her life, no matter what branch of mathematics he or she decides to go into. It is also a research challenge for mathematicians without too much background. Inequalities have a fascination of their own; there are so many of them that simply do not fit into any theory, and others demand their own theories (or theorylets). This book can make one major claim that few other books can: completeness. It is awesome to note, as one leafs through its pages, the extraordinary developments that started with some flimsy little inequality that we thought would never even make the advanced problems section of the *Monthly*. This book should make interesting reading for philosophers of mathematics, if they want to observe how mathematical ideas really develop. But how many of our philosophers of mathematics can read about inequalities?

J. ADÁMEK, H. HERRLICH, AND G. E. STRECKER, *Abstract and Concrete Categories*, Wiley, 1990, 482 pp.

What? Another book on category theory? It better be a good one! And this one is. It displays what few other books on category theory do: kindness towards the reader, a willingness to explain, rather than the mathematical constipation that is a characteristic of many advanced mathematical expositions. Luckily, these concepts, previously scattered through the literature, have at last been collected in book form; otherwise they might have gone astray.

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Editor

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